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JULY
1947

Journal of DENTAL MEDICINE

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Volume 2 Number 3

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AMERICAN ACADEMY OF DENTAL MEDICINE

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THE JOURNAL OF DENTAL MEDICINE

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OBJECTIVES OF THE AMERICAN ACADEMY OF DENTAL MEDICINE

(*Quoted from the Constitution*)

"To promote the study and dissemination of knowledge of the cause, prevention and control of diseases of the teeth, their supporting structures and adnexa and related subjects; and to foster and promote a better scientific understanding between the fields of dentistry and medicine."

THE JOURNAL OF DENTAL MEDICINE

Volume 2 July 1947 Number 3

EDITORIAL

IN REVIEW

With this issue the Journal of Dental Medicine completes its first year of publication. Like all infants it has had to learn to stand before it could walk. We have attempted to present material broad in scope and far reaching in mutual interest to both the dental and medical professions.

It has always been the will of members of the healing arts to disseminate their peculiar knowledge to their colleagues for the benefit of all. Thousands of men who have recently returned from service eagerly await and consume current dental literature. Also included in this category are countless others who, due to the severe pressure of practice during the war years found it impossible to keep up with current material.

H. L. Freeland recently said, "The inter-relationships of oral and systemic diseases have been fully established. When dentists resist the suggestion of the integration of dental and medical science they give expression to an inferiority attitude which stems from their inability to discuss lucidly and scientifically, the common problems of the dentist and physician. To express it more aptly dentists and physicians do not talk the same language. How, then, unless by broadening the basis of dental education may the biological significances of dentistry be demonstrated to medicine."(1)

It is our desire to go on helping to furnish this need with articles of interest, freshness, and importance.

The membership of the Academy has grown steadily this year. Our list reveals representation from New York to California and from Maine to Texas. Our foreign membership includes such countries as Iceland, Greece, Canada, Mexico, Argentina, and South Africa. Letters have been received from all over the world showing interest in and offering encouragement for the objectives of the Academy. We feel therefore that the difficulties and problems which were met and overcome merited our efforts.

We are confident that with the continued interest and support of our membership, the Academy and its journal will go on to achieve these objectives with ever increasing success.

A.N.A.

1. Freeland, H. L. The Future of Dentistry. J.C.D.A., 13:207-216, May, 1947.

RETIRING PRESIDENT'S ADDRESS*

Samuel Charles Miller, D.D.S., F.A.C.D., New York, N. Y.

The American Academy of Dental Medicine was founded November 16th, 1945, "to promote the study and dissemination of knowledge of the cause, prevention and control of diseases of the teeth, their supporting structures and adnexa and related subjects; and, to foster and promote a better scientific understanding between the fields of dentistry and medicine." In the history of the Academy credit should be given to the following, not only as founders, but also as diligent workers in the initial development of this organization:

Charles E. Barrett, Jr.
J. Lewis Blass
William Greenhut
Samuel Charles Miller
Sidney Sorrin

The Academy has just completed its first and I hope its most hectic year.' While all seemed quiet to the membership at large, a small group in New York City had, through frequent meetings and much travail, carried the Society through its toddling period. The Constitution and By-Laws, now such a complete document, involved many hours of combined effort by the founders and charter members. Publication of a journal which might have been delayed for some time while organizational activities were under way, has already reached the fourth issue. All steps necessary for a sound foundation on which the future development of this organization may grow, and the careful selection of prospective members, must be credited to the thirteen charter members.

Allan N. Arvins
Charles E. Barrett, Jr.
J. Lewis Blass
Louis R. Burman
William Greenhut
Abraham Goldstein
Julius N. Obin
Milton Hollins
Maurice Malsky
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Harry Roth
George J. Witkin

It should be emphasized that membership in the Academy may be had only by invitation and that only those who would be actively interested and a credit to the entire group were selected. At present, the Academy has 74 members in thirty-one cities and six foreign countries. Although rapid expansion is not advisable, the coming year should see a much wider geographic distribution.

Associate members, although devoid of voting privileges, are considered of equal importance in the development of the Academy and, for this reason, are being selected with great care. Those already elected are outstanding in the field of medicine and are respresentative of those with whom the dentist may not only converse intelligently upon dental problems, but also share mutual respect and sincere cooperation.

The following suggestions are made to the incoming administration:

(1) The Journal of Dental Medicine should be placed in the hands of a reliable publisher who will take the responsibility for the mechanical perfection of the format. An advertising agency should be given the task of securing the proper type of ads rather than allowing members of the Academy to act as solicitors.

(2) The organization of sectional groups in various localities should be undertaken without delay. This would permit regular meetings of small groups with continued interest and growth, rather than waiting for a single annual meeting.

*Read before the American Academy of Dental Medicine, June 15, 1947.

An effort should also be made to bring under the Academy local groups such as those in California, Chicago and Philadelphia to strengthen their position and ours, as well. A committee should be appointed at once whose only function would be the organization of sections.

(3) All members and associate members should be strongly encouraged to select from their acquaintances those who, by their accomplishments and efforts in related fields, have shown qualifications suitable for membership. This should especially be applied to associate memberships.

(4) Officers and committee members should be decentralized as soon as possible. Although in the organizational proceedings it was necessary to have a small nucleus of activity, the growth of the Academy and its national and international influence will be enhanced greatly by geographic dilution.

(5) Serious consideration should be given to the establishment of an award in every dental school possible for undergraduate proficiency taking the direction of dental medicine. Not only will this present the Academy as a fostering institution, but it will also create a greater consciousness of Dental Medicine on the part of future dentists in this field. In the future, as the treasury grows, similar awards should be considered for medical schools.

(6) The above may be replaced by a form of Junior membership to be established in which the outstanding student in each school is so recognized. He would receive the Journal for the first five years without payment of dues and then be voted upon for active or associate membership, as the case may be, on proving himself duly qualified.

The outgoing President is indebted to his fellow officers and the various committees for their efforts in the past year. It was difficult for committee members in widely-separated cities to communicate on the many problems which must be considered in the business of the various committees. The fact that such committees have functioned so successfully in this formative year is to be credited to the various chairmen. Of all, the greatest responsibilities devolved on Dr. Charles E. Barrett, Jr., as chairman of the Membership Committee. Dr. William Greenhut as Secretary was unstinting in his efforts. Credit for the editing of the Journal goes to Doctors Harry Roth and Allan Arvins; yet, the journal itself would have been impossible without the tireless efforts of the Business Manager, Dr. Louis R. Burman. The meeting today was arranged by Dr. Sidney Sorrin and his Program and Arrangements Committees. Its success is self-evident. The luncheon arrangements were made by Dr. Harry Roth.

In the coming years I will look upon the growth of the Academy with the warmth of kinship. I will share with the founders and the many who are to follow in their footsteps the satisfaction not only of watching its growth, but, with far greater pride, the joy of basking in its accomplishments.

57 West 57th Street

DENTAL MEDICINE*

WALTER H. WRIGHT, M.S., D.D.S., Ph. D.
Dean, New York University College of Dentistry

I have been invited to discuss briefly the subject of Dental Medicine which in its general scope includes all fields of dentistry that restore and maintain oral health and prevent dental and related diseases. It is desirable on this occasion to view in perspective the important position of dental medicine in our profession and its importance to general health problems which confront the dental and medical professions.

Medicine is the science and art dealing with the prevention, cure or alleviation of disease. Dental medicine, therefore, is the science and art dealing with the prevention, cure or alleviation of disease of, or pertaining to, the teeth. It aims to prevent disease and to restore and preserve dental health. The extent to which diseases of the mouth involve the entire body is as yet unknown. Likewise systemic diseases may involve dental and related structures creating a two-sided problem which will be mentioned later.

In 1935, The Curriculum Survey Committee of the American Association of Dental Schools recognized the importance of oral (dental) medicine not only as a discipline for dental students but also as a reality for practitioners of dentistry. In its report, A Course of Study in Dentistry, reference is made to diseases of the dental pulp and periapical tissues, diseases of investing tissues of the teeth, lesions of the lips, cheeks, tongue, and other nonsurgical diseases of the mouth, dental caries, disorders of the salivary glands and ducts, and differentiation of dental diseases and oral manifestations of systemic disturbances. (pp. 51, 52, 53.). Discussing the systemic sequelae of oral infections, the report states, "The mouth is obviously the site for the beginning of many infectious processes. Also it is one of the commonly recognized portals for the penetration of bacteria into the body. The etiological relationship of oral infections to systemic disease is therefore a matter of major importance and one to which increasing attention has been paid in the past twenty-five years. (p. 22.). The mouth is subject to many diseases, disorders, and deficiencies. They arise from a lack of proper growth and development, infectious processes, neoplastic processes, injuries, senile degeneration and other factors. Some appear to be local in origin and effect, while others have important systemic relationships, either they are the result of systemic disturbances, or they produce such disturbances. Although the incidents of systemic disturbances resulting from oral infections is not known, they appear to be numerous." (p. 23.).

In the 1926 Carnegie Foundation report, Dental Education in the United States and Canada, Dr. William J. Gies states, "The advent of roentgenography in dental practice twenty-five years ago as an important aid in the detection and diagnosis of hidden ailments of the teeth and supporting tissues, the general recognition during the past decade that infectious maladies of the teeth and surrounding tissues may occasion serious disease in other parts of the body, and recent findings in chemical biology, which lay new emphasis on the importance of physiological diets and of balanced glandular functions for normal nutrition and dentition, have made the development and application of means for the prevention of dental disorders and of their systemic sequelae the paramount duty of the dental profession." (p. 24.).

At present, the Council on Dental Education of the American Dental Association has taken a most important forward step in recognition and promotion of

*Read before the American Academy of Dental Medicine, June 15, 1947.

dental medicine through the newly established plan for hospital dental internship designed to enlarge the dentist's knowledge of oral and systemic relations in health and disease.

Formerly, dental medicine was thought of as an isolated area of general medicine keeping lonely and self imposed vigil over the health of the mouth. Advances during this century, however, have shown dental medicine as an integral part of general medicine without which the treatment of many diseases is incomplete. Former lack of interest on the part of dentists in the oral manifestations of systemic disease, and a similar unconcern on the part of physicians regarding systemic disturbances resulting from dental disease have prevented mutual understanding and cooperation in our common objectives of both professions. Advances in general and dental medicine during this century have made it clear that dentistry and medicine must work together to meet the increasing health needs of the public. Modern clinics and hospitals recognize the important contribution of dental medicine to diagnosis and treatment and have admitted dentists to ranking positions on their staff.

Dental medicine like general medicine has grown so that no single person may hope to encompass the whole. Broadly speaking, it includes surgery, whether of hard or soft tissues, for by this means oral and dental tissues may be restored to health. It depends on anatomy for an understanding of the tissues of the human body, on physiology for the knowledge of normal processes, on pathology for its interpretation of disease, on bacteriology for its identification of micro-organisms which cause disease, on pharmacology for its success in combating disease by means of drugs, on radiology for steady advance in methods of diagnosis and treatment, on neurology, in its broad sense, for our understanding and treatment not only of pathology of the nervous tissues but also of psychosis affecting dental and general health, on anesthesia for the reduction of pain as required for the proper treatment of disease, and on prevention for steady progress toward the elimination of dental disease.

Since dental medicine is based upon the same principles and practiced by the same arts and skills as is general medicine, it is difficult to delimit, or to circumscribe the respective zones of influence of the dentist and physician. It is not uncommon that physicians have extracted teeth for alleviation of systemic disturbances, or that dentists have administered systemic medication for the relief of dental disease. Today, however, the welfare of our patients requires not overlapping, but integration of dental and medical health service. By training and licensure each is qualified to contribute to the patient's welfare and this can best be done by wholehearted cooperation.

If dentists and physicians should regard the patient as a single, instead of a multiple health problem, requiring unified instead of multiplied health service, a new pace would be set in the conquest of disease, sickness and death. Diseases requiring the services of both dentist and physician would be brought under control in less time, with less suffering, with less cost to the patient, and with less loss of time to all concerned.

The health needs of the public are overwhelming and it is the ethical duty of dentists and physicians to give the patient the benefit of a modern integrated health service. This cooperation does not require that the dentist shall be a physician, or infer that the physician be a dentist. It does require that each shall grant the other the respect and confidence necessary to the welfare of the patient. The dentist must not expand his treatment to include areas beyond the scope of his specialty. Likewise the physician should not underestimate the dentist's qualifications or extend his treatment, including diagnosis and planning, into the dental area, without consultation with the dentist.

It will bear repetition that dentistry has been an autonomous profession,

equivalent to a specialty in medicine and has been licensed as such since 1842. It now consists of over 70,000 practitioners in the United States. In the medical profession there are 24,750 specialists of which 3,848 otolaryngologists represent the largest group.

Dental education has made notable advances during the past thirty years and its requirements in basic sciences and clinical practice now compare favorably with those of medicine. Today, dentistry's contribution to the health of the public demands that it shall not only be included, but that it shall be integrated with the total health program.

It may be helpful to think of dentists and physicians in terms of a baseball team each member of which represents a specialist of either profession. The batter represents the patient, the center of attention, on whom all eyes are fixed. He is afflicted with a dangerous baseball disease, scoreitis, and each player is determined to prevent it from spreading around the bases. The ball (the germ by which scores are made) when it has been hit, is recovered, transformed into an antibody and hurled to first base where frequently the disease is stopped in its tracks.

Occasionally the ball is knocked over the fence into an area momentarily beyond the specialties of both dentistry and medicine. On such occasions the player marks up a score against the professions which are not sufficiently integrated or developed to cope with the emergency. Frequently, a player in the outfield or infield fails to do his part which imposes additional work and a penalty on the whole team.

This farfetched analogy stresses one all-important prerequisite, either in baseball or health service, namely cooperation. As knowledge of disease and its treatment increases, there will be an increasing number of specialists. There is slight probability that the general practitioner will be able to administer more than a small part of the ever widening field of dental or general medicine. We may expect that medicine and dentistry will develop more specialties in keeping with present trends. This will require increasing cooperation within a single profession as well as among all professions in order that the public may be benefited by the latest findings in medicine and allied sciences.

Dental medicine is the liaison between the dental and medical professions. Physicians and dentists, as shown by the membership of this Academy, have moved into this area for the purpose of bridging the gap between dentistry and medicine. Upon you, who have dedicated yourselves to this great task, there rests a responsibility to lay well the foundations for this rapprochement so that each profession may enjoy the full resources of the other, and that the public may find renewed hope and health in an integrated and inclusive health service.

The aid which we feel impelled to give to the helpless is mainly an incidental result of the instinct of sympathy, which was originally acquired as part of the social instincts, but subsequently rendered more tender and widely diffused. Nor could we check our sympathy, even at the urging of hard reason, without deterioration in the noblest parts of our nature. The surgeon may harden himself whilst performing an operation, for he knows that he is acting for the good of his patient; but if we were intentionally to neglect the weak and helpless, it could only be for a contingent benefit, with an overwhelming present evil.

Charles Darwin (*The Origin of Species*)

THE LOFTY MISSION OF THE PHYSICIAN-DENTIST

POPE PIUS XII

(Translated from "Liberté", Fribourg, Switzerland, November 9, 1946 by Albert Laferrière, D.D.S., Montreal, Quebec.)

The Association of the Physician-Dentists of Italy recently held a meeting in Rome. At the close of their sessions, the members were the guests of the Holy Father who addressed them at Castelgondolfo. Exhibiting most remarkable technical information, the Pope endeavoured to stress the peculiar features which characterize the dental profession as well as the moral and social mission which it implies. The Pope's address follows:

How many, amongst laymen, have an idea of the scope of the studies and knowledge necessitated by the profession of dentistry, of the efforts at times painful which it demands, of the moral virtues it helps to bring into practice?

The dentist requires, first and foremost, an extensive knowledge: the knowledge of general medicine, in order to perceive and discern the reciprocal action and reaction of the human body, of the organs and of the tissues, many in number and delicate in nature, which constitute the object of his care; the thorough and particular knowledge of each of such organs and tissues of extreme sensitiveness and at the same time of great complexity, gathered within the small space of the buccal cavity; they are the seat of the most varied and important functions but as well of numerous aberrations and unspeakable sufferings. The dentist is required to know physiology and chemistry, botany and pharmacology; this learning is essential in order to enable him to unravel the causes of the ill and to apply the appropriate remedies.

Furthermore, an exquisite art has to be devised out of natural intuition and experience acquired through care and application in order to diagnose the causes, sometimes remote and oftentimes concealed behind objective symptoms apparent to the eye or otherwise perceptible. With such art, intellectual in its nature, must be combined skilfulness in preparing and executing work of the utmost precision with perfect accuracy and with the steadfastness of eye and hand which such work requires.

Above all tact and a psychological sense of the very finest is needed to exert the forceful persuasion and moral authority so often required to ward off or conquer instinctive dislikes or fears which, as a rule, are more painful and more obstinate than pain itself.

How much constancy, how much patience, how much physical resistance is needed by the dentist! What fatigue he must bear for whole days and during long years — in a continuous tension of senses, of nerves, of the entire body, of spirit, of will, of sensitiveness; always standing and often in an uncomfortable position, with eyes strained in attention. Each hand is occupied and yet must remain alert and avoid any contraction of the fingers while handling more than one instrument simultaneously, though many movements are often thwarted or rendered more difficult by the reflexes or reactions of the patient. And throughout such intense application, the dentist must preserve his composure, his politeness, his gentleness, his spirit of charity.

The dental profession has also a social aspect. We have only to consider the importance, in a man's life, whether private or public, of each of the parts, organs, tissues, mucous membranes, muscles, nerves, glands, blood vessels and arteries, all enclosed in the oral cavity. Any little disturbance or slight alteration in one of those elements may tell on the health, the well-being, the character or disposition, the working capacity of a man and on the relations of that man with his fellow-beings.

On the good or bad condition of the dental or salivary apparatus depends the proper or the defective functioning of the digestive apparatus and, as a consequence, of the whole organism. On the good or bad condition of the epithelial tissue and of the papillae of the tongue depend the specific sensations of taste, sensations which are liable to be misused and which are too often actually misused, but which, in themselves, are useful in the selection and consumption of food. A slight pain, some discomfort between the gingivae will sometimes suffice to irritate the nervous system and deprive a man of his equanimity, a humiliating albeit evident sign of human frailty.

And who is not aware of the influence exerted on a man's voice, its tone and clarity, on the very articulation of words, by the conformation and soundness of the palate, by the tongue, by the denture, by the inner walls of the cheeks, by the jaws and by the lips? All that is of great importance, whether it concerns the activity of the speaker, the reader, the professor or whether it applies to the simple intercourse of every day life, the charm of conversation or the elementary ability of making oneself understood.

Even more mysterious and more surprising is the silent role played by the mouth in expressing one's personality and sentiments. Such expression is reflected not only on the forehead, it also appears on the lower part of the face. A mere motion of the lips will impart to expression a thousand and one shades.

During the first world war, the science and art of stomatology supplied shining proof of their power and progressed at gigantic strides. We may well speak of moral and social resurrection when we think of so many victims of the war, of accidents and tumors which have benefited by the progress of stomatology; terribly deformed or mutilated, those faces made an impression of horror which even the most affectionate kindness did not always succeed in dissimulating entirely.

To come to the assistance of so many unfortunate people, the diverse specialists in stomatology have combined their science and their skill, all the resources provided by the latest achievements of progress: radiography, anesthesia, surgery, prosthesis, grafting, both mechanical and plastic. They have put in their work all their hearts as men and, many of them, all their charity as Christians. And lo! out of the hands of those admirable sculptors, poor human wrecks up to then downhearted at the prospect of a life beyond the pale of society, discouraged, perhaps desperate, have come out strong, hopeful, anxious to resume their place in the world and to fill the task which has been assigned to them.

You have a right to be proud of their gratitude and of the gratitude of their families, proud to have given such noble collaboration to the mighty work of the Creator. Doubt not of His blessing as we ourself bless you, we the humble representative on earth of Him, the common Father of those who suffer and of those who cure the sick.

He who does not bellow the truth when he knows the truth, makes himself the accomplice of liars and forgers.

One must always tell what one sees. Above all, which is more difficult, one must always see what one sees.

A word is not the same with one writer as with another. One tears it from his guts. The other pulls it out of his overcoat pocket.

Charles Péguy (*Basic Verities*)

THE ROUTINE OF THE OTOLARYNGOLOGIC EXAMINATION

HERMAN J. BURMAN, M.D., F.A.C.S.

The practice of dentistry and otolaryngology are so closely allied, it is obvious that the specialist in either field must be well aware of the other's problems in order to make an alert diagnosis and initiate proper treatment. It is not uncommon, for instance, for a malocclusion to produce pain in the ear, nor for antrum disease to cause toothache. It is for this reason that I have arranged this routine which for a number of years has been used as a standard in teaching at the College of Physicians and Surgeons at Columbia University.

Take a careful history. It is really of great importance for although some urgent complaint such as nasal discharge, earache or hoarseness may have brought the patient to the clinic, these may be merely localized manifestations of a general disease, for instance, the hoarseness that goes with chronic pulmonary tuberculosis. It also may be that the patient has been referred for consultation for the determination of the possible presence of a focal infection.

Inquire first as to the chief complaint, allowing the patient to elaborate on this in some chronological order. Ascertain the duration of the symptoms, their relationship to time of day. The history of any previous similar attacks, the presence of pain, fever or discharge. Is there any history of previous similar trouble or of any operation on the ear, nose and throat? Inquire as to the general health, family history of disease and the patient's use of alcohol or tobacco.

Now elaborate on the chief complaint. If it be regarding the nose inquire about the following:

THE NOSE

NASAL DISCHARGE: Is it of recent or long standing duration? Serous watery fluid is usually associated with acute rhinitis, vasomotor rhinitis, allergic rhinitis, particularly hay fever, exanthematous diseases, reaction to the inhalation of irritant vapors, excessive lacrymation and rarely the escape of cerebrospinal fluid.

Purulent discharge may follow the serous discharge of any acute nasal inflammation. If it is acute and bilateral it is probably due to local infection with some pyogenic organism. For the most part, if seen in any quantity, it is usually an indication of a purulent sinusitis. Chronic hypertrophic and atrophic rhinitis also manifest pus in the nose, as more rarely, do syphilis and tuberculosis.

When the discharge is unilateral and purulent, especially when blood tinged, a foreign body or rhinolith may be suspected, as may also a new growth, whether benign or malignant. Furunculosis will be obvious because of the marked swelling and discomfort.

NASAL OBSTRUCTION: may be unilateral or bilateral. The former may be due to infection of the sinuses on one side with its consequent discharge. It may be due to new growths in the nose, septal deviation, or hypertrophied turbinates which, however, may also be bilateral. Furunculosis, rhinoliths, and foreign bodies are usually unilateral. Hypertrophied adenoids usually produce bilateral obstruction as do allergy and vasomotor rhinitis; the latter often produce intermittent symptoms.

HEADACHE: This is a common complaint. Its location will often point to the sinuses involved. In the malar region it usually is related to the antrums, in the frontal region to the frontals, between the eyes and frontal region to the ethmoids, in back of the head to the sphenoids. Headache present in the morning and gradually relieved towards evening is usually due to infection of the frontal or ethmoids, whose discharge drains out better in the upright position because of the dependent position of their ostia of drainage. Pain which increases in severity towards eve-

ning is usually a manifestation of disease of the antrum or sphenoid because in the upright position the ostium of drainage is higher than the floor of the sinus.

EPISTAXIS: This is usually unilateral. It may be due to many local conditions, such as injury from a blow on the nose or head, violent nose blowing or coughing, nose picking, foreign body in the nose or operation on the nose, ulceration of traumatic, syphilitic, tubercular or neoplastic disease. Varicosities of the veins of the nasal mucosa is a very common cause. Bleeding also occurs in the early stages of severe common catarrh and exanthematous disease, during alterations of atmospheric pressure, as in airplane ascent, mountaineering, diving and working at great depths. Nose bleed may be a local manifestation of various blood dyscrasias and the onset of specific fevers. It is sometimes seen as vicarious menstruation. Often it results from hypertension.

THROAT AND MOUTH

When the throat or mouth is the part complained of, the most common symptoms are pain or discomfort. It is important to elicit whether the pain is constant or occurs only on swallowing, or whether localized to one side or not. Tonsillitis is most often bilateral, though it may begin on one side, whereas peritonsillar abscess is usually only on one side.

Vincent's angina, agranulocytosis, stomatitis, retropharyngeal abscess, syphilis, tuberculosis, malignant ulcerations and various neurosis may be the cause of pain. Also to be considered are diseases of the salivary glands and of the palate and uvula. Mouth breathing which is caused by nasal obstruction and postnasal discharge which irritates the pharyngeal mucosa may also be the cause.

Pain in the throat especially that in the lateral pharyngeal wall and the base of the tongue is frequently referred to the ear.

LARYNX

Laryngeal complaints are usually those of changes in the voice, pain, dyspnea or cough. Intermittent symptoms are generally due to acute or subacute inflammatory conditions or the accumulation of secretion in the larynx while constant symptoms indicate a chronic inflammatory condition, neoplasm or ulceration.

HOARSENESS results from acute and chronic catarrhal laryngitis, herpes and edema of the cords, membrane and pseudomembranes which obstruct the glottis, burns or abscess of the larynx, foreign bodies, paralysis of the cords, various ulcerations from general diseases and neoplasm. The degree of hoarseness depends on the location of the lesion. The nearer the anterior commissure, the greater the hoarseness.

COUGH of an irritative nature is frequently a concomitant symptom. Paresis and paralysis of the recurrent laryngeal nerve which may be pressed upon by mediastinal lesions or adhesions will cause varying degrees of hoarseness because of the failure of the cords to approximate properly.

PAIN around the larynx often is referred to the ear and is also associated with dysphagia.

DYSPNEA, because of laryngeal affection, may result from any factor, which diminishes the calibre of the normal air space of the larynx, inflammatory lesions which produce swelling of any of the tissues of the larynx, foreign bodies or neoplasms which obtrude into the lumen, weakness or paralysis of one or both cords, so that the larynx does not open completely.

THE TRACHEA, BRONCHI AND ESOPHAGUS

COUGH AND EXPECTORATION are the most frequent complaints associated with tracheobronchial conditions. Occasionally hemoptysis will also be a prominent symptom.

First to be remembered in connection with our work is the possibility of the inhalation of a foreign body or irritant vapors. Postnasal discharge dropping into the larynx and trachea is common and ir-

ritation from an unusually long uvula is not to be forgotten. One must of course not lose sight of the general diseases such as the ordinary cold, whooping cough, influenza, tuberculosis, etc., in fact any pulmonary diseases, which may produce cough. Not to be overlooked are chest lesions which impinge by pressure on the airway.

HEMOPTYSIS may usually be referred to the tracheobronchial tree or lung itself. It is possible for ulceration of the larynx from tuberculosis, syphilitic and malignant ulcerations to produce hemoptysis. By far the most common cause is of course pulmonary tuberculosis. But it must be remembered that injury to the chest, cardiac condition, abscess, ulceration, neoplasm and infraction of the lung may also be causes. Ulceration of the bronchi from whatever causes and various blood dyscrasias may also be factors.

In ESOPHAGEAL CONDITIONS, dysphagia will be the most common complaint. Difficulty in swallowing may be due to a foreign body, especially if the patient is a child. In adults, the history is usually one of progressive difficulty in swallowing. If it becomes progressively difficult to swallow solid foods, then one must suspect an organic lesion. If both liquids and solids cause difficulty, then we are likely to be dealing with a functional lesion. Of the organic lesions one must consider stricture due to injury or burns from swallowing corrosive solutions, neoplasm of the esophagus and occasionally aneurysm or tumors of the mediastinum pressing against the esophagus. In cases of esophageal diverticulum, there may also be difficulty in swallowing. Dysphagia may also result from cardiospasm, postdiphtheretic paralysis, hysteria and occasionally from cerebral lesion. Pain in the esophagus on swallowing may be due to esophagitis, peptic ulcer of the esophagus or ulceration of the esophageal mucosa from whatever cause.

REGURGITATION of food may be due to any obstructive lesion of the esophagus or diverticulum of the esophagus, remembering of course most often the stomach is at fault.

HEMATEMESIS may of course be due to many causes such as disease anywhere in the gastrointestinal tract, portal obstruction and blood dyscrasias. But of lesions involving the esophagus directly, we must consider, carcinoma, foreign bodies, rupture of the esophageal varicose veins, mediastinal growths perforating into the esophagus.

THE EARS

EARACHE: This is a very common complaint especially in children. Acute otitis media with its throbbing, shooting pain is the most familiar symptom. It is usually associated with fever. Chronic middle ear suppuration, while painless, may be painful during an acute exacerbation or when bone necrosis occurs. External otitis and furuncles cause severe pain especially on touching the auricle. Trauma and frostbite may cause pain. It may be referred from diseased teeth, disease of the sinuses especially the antrum, ulceration or inflammation in the throat, base of the tongue or pyriform sinuses. Parotitis and temporomandibular joint inflammation may also cause pain to be referred to the ear.

OTORRHEA may be unilateral or bilateral, serous, mucoid, purulent or sanguinous in character. It may be constant or itermittent. It may come from the middle ear or be the product of inflammation of the external canal wall. To be considered are foreign bodies in the ear canals, eczema of the canal, rupture into the canal from the parotid gland. When the discharge comes from the middle ear it is due to acute or chronic middle ear infection. The purulent material may be bloody from granulation tissue, rarely as a result of malignancy. Occasionally one sees watery cerebrospinal fluid after an injury.

DEAFNESS: This a common symptom and may vary from a slight difficulty to almost complete loss of hearing on one or both sides. Sudden deafness is usually due to cerumen or foreign body in the canal which obstructs the conductive apparatus. Rarely leutic lesion of the eighth nerve will produce complete deafness on one side. Deafness is more or less marked

in all inflammatory diseases of the middle ear. Catarrh of the eustachian tube or partial abstruction of its orifice by lymphoid tissue is a factor. Otosclerosis is of course a common cause. It may result from many diseases which involve the labyrinth or nerve, such as meningitis, trauma, blood dyscrasias, hemorrhage in the brain or labyrinth. Drug poisoning, especially with quinine, changes in atmospheric pressure are also factors.

VERTIGO: This depends on the disturbance of the sense of equilibrium. It may result from lesions of the cerebellum or its afferent tracts. It may be toxic in origin, alcohol and tobacco are examples, or of ocular origin, especially when there is ocular muscle weakness. Disturbances of the blood pressure as occurs in anemia, hypothydroidism or hypertension may lead to dizziness. Vertigo is most common of aural origin, and is a frequent symptom of disease of the ear especially of the labyrinth. In its most intense form it is one of the symptoms of so-called Meniere's disease (dizziness, tinnitus, deafness.) Syphilis of the internal ear may be a cause. Blockage of the eustachian tube is a frequent cause, as well as foreign body or occasionally impacted cerumen. Vertigo is not infrequently associated with chronic middle ear suppuration. This is due to labyrinthine irritation or inflammation.

TINNITUS: The noise in the ear is subjective, continuous or intermittent, most common noises being that of humming or roaring. Catarrh of the eustachian tube is probably the most common cause. Any inflammatory disease of the middle ear, acute or chronic, may cause tinnitus. It is an early symptom of otosclerosis. The ingestion of certain drugs — quinine, salicylates or antipyrin, may be a cause. Occupations, such as telephone operating, boiler making or working in any very noisy room, may be a factor in producing tinnitus, and lastly lesions of the inner ear or lesions of the brain.

THE PHYSICAL EXAMINATION

Seat yourself directly before the patient so that his eyes are at about the same level as yours and his knees in between yours. You will notice that the source of illumination is to the right of the subject and is preferable. Now adjust your head mirror over the left eye so that the light is directed from the source of illumination to your mirror, then to the patient's face. Close the right eye while peering through the aperture in the mirror with the left, then steadying the patient's head, move your own hand slightly forward or backwards to obtain the sharpest illumination. Now open the right eye in order to have the full use of binocular vision. Establish some definite routine of examination so as not to commit the sins of omission. It is well to remember that children will object most to the examination of the throat, so that this examination had better be left for last. It might be mentioned here that small children may best be examined when they are wrapped in a sheet and placed on an examining table.

Note the general appearance of the patient and the texture of the skin and hair. It may give you some clue as to his health. Note the color and symmetry of the face, most faces are asymmetrical, and you will naturally find smaller structures on the smaller side of the face.

THE NOSE

Proceed with the examination of the nose. Externally you will see the size and shape, whether it is in the mid line or pushed to the side, if it is humped, twisted or saddle back. Is there any evidence of injury, such as, contusion, laceration or fracture? The latter can be determined by gentle palpation which elicits crepitation. Are there any evidences of congenital malformation?

The interior of the nose is examined with the aid of a nasal speculum, preferably one from which the springs have been removed. For the patient's right nostril hold the speculum in the right hand. The blades of the speculum are to be inserted gently in such a way that they lie against the upper and lower portions of the nares.

Inspect the vestibule of the nose for evidence of excoriation, furunculosis or

fissures. These may be due to a local skin condition, but are usually secondary to discharge from the nose. Flexing the neck slightly brings the anterior part of the nasal fossa well into view showing the floor of the nose, the anterior tip of the inferior turbinate, the middle turbinate and meatus better. On the medial side is the septum. Note the condition of the mucosa, whether it is congested or pale. Congestion indicates infection, whether acute or chronic, while a pale waterlogged mucosa should make one suspicious of allergy or vasomotor rhinitis, provided there is no acute cold. If the mucosa, especially over the turbinates is thickened and pits on pressure, it is hyperplastic, if it does not pit it is hypertrophic. Both these latter are the result of chronic irritation.

DISCHARGE seen in the nose may be watery, mucoid, mucopurulent, purulent, or even sanguinous. The location of the mucoid or purulent discharge as seen in the nose indicates which sinuses are involved. Discharge from the middle meatus seen under the middle turbinate indicates disease of the anterior group of sinuses which are the frontal, anterior ethmoids, and the maxillary antrum. Discharge from the superior meatus, seen between the middle turbinate and the septum indicate disease of the posterior group of cells which includes the posterior ethmoids and the sphenoid.

The clinical examination of the sinuses is supplemented by employing transillumination and x-rays.

TRANSILLUMINATION requires the use of a dark room. The apparatus consists of suitable electrical outlet to which can be attached a rheostat, by means of which the amount of current is regulated, and an insulated wire connecting the rheostat with the lamp. The lamp should be sheathed in a piece of hard rubber tubing or bakelite, the end of which projects slightly over the head of the lamp.

Illuminate each frontal region by placing the head of the lamp under the supraorbital wall. Move the sheaths up to the skin so that no light escapes between the top of the lamp and the supraorbital region. Compare the illumination of both sides taking into account the frequent asymmetry of the frontal sinuses. Diminution in illumination is diagnostic to a degree that fluid or thickened membrane is interfering with the passage of light.

The maxillary sinuses are transilluminated by placing the lamp against the malar region just below the rim of the orbit and looking at the palate through the open mouth. If there is an upper plate have the patient remove it. The lamp is now placed in the mouth, the patient is instructed to close the lips but not the teeth. Normally the antrum should be light about the nasolabial angle, show a shadow over the malar region and be light again under the eye. The pupillary light reflex is present. If pathologic changes have taken place and the lining of the antrum is thickened, or there is a fluid, the diseased side is darker and the pupillary light on that side is lost.

The ethmoid cannot be satisfactorily transilluminated. The sphenoids cannot be transilluminated. Transillumination is of most value when the sinus disease is unilateral.

X-ray is a valuable aid. It delimits the anatomy. It is a permanent record. Differentiation between free fluid in the sinuses and a thickened lining membrane can often be made. The relative opacity of the sinuses and the character of the bony walls are the two elements to be considered in the interpretation of films. They will show bony deformities, cystic conditions, foreign bodies and sometimes new growths. Radiopaque solution may be injected into the sinuses to aid the diagnosis.

Polypi when present are usually seen as coming from the middle meatus although they may be anywhere and are the result of chronic irritation of the mucosa, usually by discharge. They look like skinned grapes and are bluish white, are single or multiple, usually pedunculated, sometimes sessile. Ulceration, when seen, may be the result of trauma, syphilis, tuberculosis, lupus, avitaminosis, exanthematous diseases, blood dyscrasias. This of course

applies to the other mucosa of the throat, larynx, etc.

Various benign and malignant growths other than the common polyp may be encountered in the nose and must be differentiated. And it must not be forgotten that the ordinary furuncle may give rise to various degrees of discomfort, redness and swelling.

NOTE THE SEPTUM which should divide the anterior of the nose into two equal parts. Its mucosa should also be pink, it should theoretically be straight and show no deviation to the right or left of the midline, and have no crests, scrolls or spurs. Actually one rarely finds a perfectly straight septum, and surgical treatment is only indicated if the deformity present interferes with proper nasal breathing or drainage from the sinuses.

A small plexus of arteries on the lower part of the septum just inside the vestibule called Kiesselbach's plexus. The plexus is formed by the septal arteries and the terminal branches of the superior coronaries. This is the most common site for nose bleed especially in children and is the result of irritation by nose picking, forcible sneezing, forcible trauma or ulceration from some general disease.

THE PHARYNX

Having noticed the condition of the lips and gums, instruct the patient to open the mouth, keeping the tongue in its normal position behind the teeth and to breathe regularly and quietly. With the tongue depressor resting against and pushing the tongue down towards the floor of the mouth, note the general color of the mucosa. Note the palate and uvula, see if there are any abnormalities of structure of function. From the uvula note the two arched pillars which proceed to the lateral wall, one ending at base of the tongue and the posterior one ending on the pharyngeal wall. Between them is the faucial tonsil. Inspect the tongue, see if it is pushed out in the midline. Note the large papillae at the base of the dorsum. When the tip of the tongue is pushed up behind the upper teeth you will see the frenum which holds the under surface of the tongue to the floor of the mouth. On each side of the frenum are the papillary like openings of the submaxillary gland. Now place the tongue depressor between the cheek and the upper teeth and pushing away the cheek there will be visible on the buccal mucosa opposite the upper second molar tooth, the wattle in which is the opening of Stenson's duct.

THE NASOPHARYNX

THE NASOPHARYNX should be examined at this time. In many patients this is difficult and preliminary anesthetization with some topical solution may be required. A small postnasal mirror is selected and the glass side is warmed on an alcohol flame or the mirror is dipped in hot water and quickly dried. Test the temperature of the mirror on the back of your hand. It should be comfortably warm. Now instruct the patient to open the mouth and breathe quietly through the nose. As your light is focused on the posterior pharyngeal wall, depress the tongue with the tongue depressor and pass the mirror with the glass side up behind the palate and between the uvula and the posterior pillar on either side. The mirror may be tilted in any direction by movements of the wrist and the nasopharynx inspected. Adenoids, if present, are seen above. Medially one sees the posterior border of the septum, laterally should be seen the posterior tips of the inferior turbinates and the openings of the eustachian tubes with the fossa of Rosenmuller behind them.

The nasopharyngoscope which is a telescopic arrangement with a self-contained lighting unit may be used to examine the interior of the nose and nasopharynx. It is well to remember that the nasopharynx, especially in children, can be examined by palpating with the index finger.

THE LARYNX

THE LARYNX and hypopharynx are examined with the aid of a medium sized or large laryngeal mirror. The mirror is warmed over an alcohol lamp or in hot water and tested against the examiner's hand. It should be warm enough so that it will not be fogged by the patient's

breath. Instruct the patient to open the mouth and protrude the tongue, while the light from your head mirror is focused sharply on the posterior pharyngeal wall. With the aid of a piece of gauze grasp the tongue with the thumb and middle and ring fingers under the tongue. The little finger is under the jaw to steady it and the index finger pushes up the upper lip. Now the patient is asked to breathe quietly and regularly and the mirror is carried into the mouth so that the metal side rests gently against the uvula and palate which it pushes up and back towards the posterior pharyngeal wall. The illumination is now concentrated on the laryngeal mirror and by gently tilting the mirror all the structures of the larynx should be seen. The epiglottis first comes into view, then the larynx itself. The image seen is inverted so that the posterior portion of the larynx is nearer the examiner and the anterior away from him. Right and left remain the same. For orientation, practice this with a laryngeal mirror and a piece of paper folded into a V. Note that the vocal cords are actually right above the true cords and hide them on expiration. But on inspiration the false cords are widely separated and seem to lie laterally.

Behind the arytenoids are the two pyriform sinuses which are the openings to the esophagus. External to the larynx one may see the base of the tongue with its many papillae and the glosso-epiglottic folds which form the shallow fossae known as the villeculae.

Examination of the trachea, bronchi, lungs and esophagus require endoscopic procedures and x-ray.

THE EARS

Now to proceed to the examination of the ear. Turn the patient to the side and observe the size and shape of the auricle. Are there any manifestations of injury or disease. Select an ear speculum of proper size (it is best to use the largest speculum which can be inserted without hurting the patient) and insert it into the ear canals, while with the other hand the auricle is pulled up in back to straighten out the external auditory canal. In a child the angulation of the canal is not so marked. The mirror is now adjusted so as to throw sharp illumination into the canal. Observe the condition of the skin to see if there are furuncles, fissures, bony excressences, excessive cerumen. The drum membrance is shiny, smooth, tense and pearly gray. It is set obliquely in the canal so that the superior and posterior surface of the membrane are nearer the examiner's eye. At the periphery of the drum is a whiter circle which is the annulus tympanicus. The white circle is deficient above at the notch of Rivinus. The handle of the malleus is seen through the translucent drum as a yellow white streak and is seen running from above downward and posteriorly to end at the umbo, where it is attached to the medial side of the drum membrane, at about the center. At this point is seen the triangle of light just anterior to the umbo. At the upper end of the visible portion of the malleus is seen a small shiny white spot which is the short process of the malleus.

In front and behind the short process are seen the two folds on the membrane called the anterior and posterior folds. Immediately above the short process is the flaccid pinkish white membrane called Shrapnell's membrane which fills in the defect in the annulus tympanicus. Occasionally the long process of the incus may be seen as a white line running parallel to the handle of the malleus but extending only about half its length.

CONCLUSION

The ear, nose, throat and larynx are of especial interest to the dentist and otolaryngologist. These practitioners can work together in complete cooperation, for in many instances the fields overlap and the effects of one disturbance in the medical field may be influencing another dysfunction in the dental field. By the use of a similar technique of examination, both the dentist and the physician may be able to understand each other better and by their cooperation render a better health service to the patient.

1235 Grand Concourse

DENTAL OBSERVATIONS IN KASHMIR (BR. INDIA)

F. B. BENJAMIN, D.M.D., Chicago, Ill.

The observations and examinations described below were made during the last 10 years in Kashmir, the northernmost part of British India. They are of special interest, as this country, in spite of its 84,500 square miles and population of about 4½ millions is, for the purpose of examination, like a secluded island. The only connection with the outside world is 200 miles of mountainous motor road, which allows an exact control of all exports and imports.

Everything mentioned below can, as far as not otherwise noted, be strictly applied only to the capital, Srinagar. This town of 240,000 inhabitants is situated at a height of 5,400 feet. The population is 95% Mohammedan, but the Maharaja is Hindu and most of the leading Government positions are held by Hindus. Illiteracy for men is 87%, and for women nearly 100%. The climate is similar to that of Northern Italy, with temperatures ranging as high as 100°F. in summer and snow in winter. In spite of the great fertility of the country, the population is very poor, even by Indian standards, (average income about one dollar per person per month). The majority of the population exists almost entirely on rice and water. More than half the population show definite signs of undernourishment, and the general life expectancy is 23 years. The average hemoglobin count is usually between 60%-70% and erythrocytes 2-3 millions.

The period of this study was critical for the general health of the country as it coincided with the gradual introduction of the polishing of rice, and correspondingly a great increase in deficiency diseases. Official statistics are not available, but a dentist could frequently diagnose cases of pellagra and beri-beri. This was amply supported by lectures of individual physicians before the Kashmir Medical Association. Rickets and osteomalacea were seldom seen in severe form, probably due to the natural ultraviolet rays in the Himalayan Hills. Tuberculosis was very prevalent and was supported by unhygienic living conditions. The 'Kashmir Cancer' described first by Dr. A. Neve is of theoretical interest only.[1]

With the help of the various ministries concerned the production and import of food were surveyed. The only significant finding during the last ten years was an increase in the production of fruit (apples, pears, almonds, nuts) which was offset by a corresponding increase in export. Sugar is not produced in the country, and the figures for import of refined and unrefined sugar, as given by the controller of imports, showed practically no change for the last ten years, (aside from the shortage of the war years).

Against this poor medical background we found a surprisingly good state of dental health. 56% of the people had teeth in a satisfactory condition.[2] Periodontal disease was hardly noticeable in the country and in the poorer classes of the towns, but very common in better situated circles. For this reason it was found much more among the Hindus. The caries index of the Hindus however, is slightly higher. They are vegetarians, and being better off financially they have softer cooked food, more sugar and more carbohydrates. The Mohammedans usually breastfeed their babies up to the age of 3-4 years, while the Hindus have by that time long weaned their children. There is a tremendous difference in general living conditions, in daily habits, customs, occupations, etc. among these peoples. The combination of all this makes it difficult to establish any definite cause for the differences in dental health.

Dental service available is anything but sufficient or satisfactory. There are in all

1. Kashmir Cancer is caused by the irritation of wood coal stoves carried by the natives in winter under their clothes directly on the stomach.
2. Satisfactory: no cavities, no periodontoclasia, loss of not more than 2 teeth (third molars excepted).

some 30 trained dentists. The majority of the population is in the hands of incompetents who manage to extract teeth, but always with the good chance of complications, as they are without proper instruments and anesthetics.

About 30% of the population clean their teeth regularly. Modern toothbrushes are not used, as their price would be something like the total average income for one month, and in addition their religion does not allow any contact with animal hair. What is used, are small sticks, about 8 inches long and ¼ inch in diameter. These they chew first, always expectorating the juice, until one end is quite soft and fibrous. The teeth are cleaned with this mouth-made brush, and it is then discarded. The whole procedure takes somes 15-20 minutes. The different kinds of wood used are:

1. "Bota weer," the common bitter willow.
2. "Kreeda weer," the sweet willow.
3. "Phulai wood," very hard and almost tasteless.
4. "Kutch wood," slightly bitter and not very common.
5. "Nim wood," two different kinds, one growing in the plains, which is supposed to be a preventive of caries and periodontal disease, the other in the hills, not believed to have these properties.[3]

As it was not possible to get a clear picture of the dental health purely from private practice and occasional visits to the Kashmir Mission Hospital, three of the leading schools were observed, (Hadow Memorial School, Biscoe Central School, and C.M.S. Girl's School). Each of these has about 450 children.[4]

The results of these examinations showed that practically the only thing done for these children were extractions and these without any regard to the effects on health, orthodontic, or esthetic consequences. As an average there were 1.8 stoppings for 100 children, which means that out of 100 children, 99 had no stoppings at all, since those children with dental attendance usually had more than one stopping.

These examinations were made for the reason that a very definite influence on dental health was expected from the replacement of hand milled rice by machine polished rice.

The author had written about the detrimental effects of such a procedure and had applied to the Government to stop the sale of polished rice, giving the dental effects as his reason. However when it was attempted to support this by statistical evidence, such evidence was not observed. There could be no doubt about the increase in beri-beri. There were no direct statistics, and the only findings from the statistical point of view was the increase in infant mortality. On questioning the children there could be no doubt about the vitamin deficiency in their diet, at a young age beri-beri does not show many clinical symptoms. As far as dental decay was concerned there were no effects noted. There was a slight increase of periodontal disease, from 11% to 13.6%.

CONCLUSION

Kashmir is an ideal country for dental investigation as all factors can be controlled easily. In spite of the fact that the amount and composition of food is entirely insufficient, the dental health is remarkably good.

The replacement of polished rice for hand-milled rice has had no effect on the incidence of caries and has caused only a slight rise in the incidence of periodontal disease.

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3. In a careful examination by Sir R. N. Chopra in his book, The Indigenous Drugs of India, Their Medical and Economic Aspect," only Nim was found to have valuable antiseptic properties.
4. First reported I.D.J. Aug. 1941, 47-49.

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The West Coast's Fourth Annual Seminar for the Study and Practice of Dental Medicine will be held at the Ahawahnee Hotel, Yosemite Valley, California, October 19 to 24, according to an announcement by Dr. Hermann Becks, President of the Board of Directors and Professor of Dental Medicine at the University of California.

Sponsored by all the Pacific Coast Dental Associations, the Seminar combines lectures with informal group discussions and question periods. The lectures will be on non-mechanical subjects, emphasizing the application of the basic sciences to the practice of dentistry, and will include such topics as nutrition, enzymology, endocrine disturbances, virus diseases, and protein biology.

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Dr. Thomas Francis, Jr., Dr. Howard B. Lewis, and Dr. L. H. Newburgh, University of Michigan; and
Dr. Gustav W. Rapp, Loyola University, Chicago, Illinois.

The number of Seminarians will be limited and applicants are required to submit a case report and must have attended a post graduate course in the basic sciences or its equivalent, during the current year.

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The program will consist of limited attendance clinics of both one and two hour duration, two progressive clinics, essays, table clinics, visual education and other interesting features.

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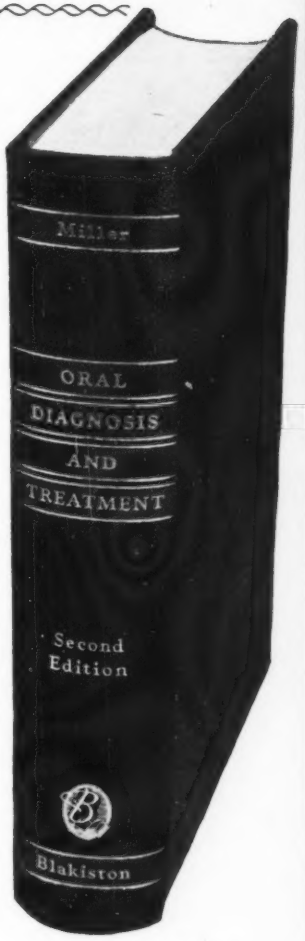

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